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HYDROPHOBIA.

Facts in relation to several Remarkable Deaths attributed to Hydrophobia. Communicated to the Editor of the American Journal of Science and Arts, by the Rev. WILLIAM CASE.

Chester, Conn., October 14.

DEAR SIR,—In compliance with your request, I have endeavored to collect the facts respecting the supposed cases of hydrophobia in this place, and the transmission of the poison from one human being to another. I ought, perhaps, to state that most of the physicians, consulted in the three cases of supposed transmission from one human being to another, attributed their death to some other disease, such as might be supposed to be attended by symptoms similar to those which characterize this malady. It is believed, however, that the material facts in these cases were never fully made known to these gentlemen. Neighbors and attendants, in whose possession they were, feared, perhaps, to disclose them.

Allow me to say that I was in some measure prepared to feel the dangers of this disease, from having, in my early years, assisted in destroying several rabid animals. The first was a dog nearly spent with the disease. He was killed by a gun, in my father's barn-yard. The utmost care, I well remember, was taken to avoid touching the animal, and to remove and bury with him the straw and loose materials on which his saliva had fallen. At a subsequent time, while the family were at breakfast, a fox appeared in the same yard, in pursuit of the fowls. He ran after them, and, when they flew, jumped high to seize them. He was not intimidated at the sight of men, or by the throwing of clubs and stones. Fears were entertained of his being rabid, and the life of a noble dog was risked in preference to suffering the animal to escape in this state. He was too feeble to run with great speed, and the dog overtook and seized him at the distance of a hundred rods. I followed in the pursuit; and with the aid of the trusty dog, a billet of wood, and a stone, killed the fox. The poor dog, which every member of the family regretted to lose, was shut up in a small stable, and fed and watered, daily, with care. In about fourteen days he began to refuse food, and to be averse to water. He soon began to loll, to discharge saliva, jump towards the scaffold floor, bite sticks that were thrust through the sides of his prison, and, when excited, to fly at its sides with such force

that he broke off his long teeth. It became evident that he was rabid, and he was killed to shorten his sufferings.

In 1807, W. C.* was bitten and wounded by a mad dog, when at the age of eleven years, and on his way home from school. After biting this youth, the dog was confined in a small apartment in his owner's house, where he was seen by many persons, and where he exhibited all the symptoms of hydrophobia. A person, in company with others, with a gun in hand, ascended the chamber stairs, displaced a part of the floor, and through the aperture shot and killed the dog. These facts are attested by a man who was an eye witness, and they are corroborated by many others.

At the time of the bite, in 1807, W. C. is said to have had a feeble constitution, but it is testified on all hands that he grew up without sickness. It is said he conducted strangely, by turns, some time before his last sickness. The disease appeared in him fifteen years after the bite, and was preceded by mental irregularity. He had a short season of strange excitement, during public worship on the Sabbath. At a neighbor's house, the next day, he suddenly jumped, screamed, broke windows, and ran out at the door, with great nimbleness of foot. He soon became quiet and returned; and when his friends remonstrated with him for such conduct, he said he could not avoid doing thus, for he had been bitten by a mad dog. During the progress of the disease, he gnashed his teeth, † discharged large quantities of saliva, had distressing spasms, and was set on biting every body and every thing. The pillow cases, through which he made holes, by taking them in his teeth and shaking them, are now to be seen. He spit on persons who came in, and on all parts of the room. He was averse to swallowing anything. He watched for opportunities to bite persons, and if he could bite any one it seemed to afford him pleasure, and was followed by laughing. He lived, after his attack, fourteen or fifteen days. It required four or five able men to attend upon him. He died Sept. 1st, 1822, aged twenty-six years.

L. T. C., S. W. H., and C. C. a brother of W. C., were all bitten by W. C. while attending on him in his last sickness. The bite in these three cases drew fresh blood from the hand or wrist, and this fact is attested by many witnesses. These three cases were preceded by mental anxiety, and followed by spasms, delirium, and lucid intervals. The first spasms were of short duration, and attended by jumping, hopping, and screaming. Successive spasms continued longer and became more severe. The eyes of all assumed a glassy and watery appearance. What I have termed discharge of saliva, was, in all these cases, called frothing at the mouth.

* The rabid dog which bit W. C. was seen when he was bitten by another supposed to be rabid. I had the facts from a gentleman now residing in Ohio, and as nearly as I can recollect they are as follow:—A strange dog crossed the orchard adjoining his house, and was seen, without provocation, to seize and bite the dog which bit W. C. The gentleman's daughter, then a small girl, now the widow of C. C., was in the orchard at the time, and her mother seeing the dog in the act of biting the dog, and being alarmed, called her in. The circumstance she well remembers, and says the bitten dog did into her father's house, instead of his owner's, not more than four rods distant, and ran under the bed. The stray dog afterwards appeared in front of the house and sat down. The gentleman pointed out the spot, described his appearance, and said he had not a doubt of his being mad. If I do not misremember, he was destroyed. The bitten dog bit W. C. between two and three weeks after he received his own bite.

† It is stated also that he howled and growled, but it is easy to suppose that the imagination may convert groans and shrieks of distress into imitative sounds.

L. T. C. was a strong athletic man ; he was bitten in 1823 by W. C., and after a sickness of two weeks died March 13, 1826, aged thirty-two years. Some weeks before his confinement, he exhibited symptoms of mental aberration.* He would hop backward and forward, and talk incoherently, for a few minutes, and then say he was sorry he conducted so, but he could not avoid it. His attendants say, the taking of water or drinks made him rave. A spectator observes, that he sometimes called for drinks, when it seemed as if he thought they would be refreshing, and do him good ; but no sooner had he filled his mouth with the fluid, than he would spirt it in the face of him who offered it, and decline to swallow the drink. So strong was his aversion to swallowing, that a near relative questions whether he could swallow. Another says that drinks were sometimes forced down ; but he shuddered at swallowing. With his mouth he seized by the arm a person attending upon him, and through thick clothing left upon his flesh the print of his teeth. He immediately said, 'Now I have hurt you, and I am sorry ; but I could not avoid it ; I must either die myself or bite you.' If he had not been confined, says one, I have no doubt he would have bitten every person in the room. A part of the time, it required seven able men to keep him to his bed and in his chamber. It is said that he was not known to walk to or from the bed, but always leaped off and upon the floor ; he would whirl suddenly round, and shift his position on the bed, and sit on his feet, and the by-standers imagined that he imitated the motions and the barking of a dog. He frothed at his mouth and ran out his tongue. He spirted drinks into the face of his attendants, spit on them, on every body and every thing, and all over the room.† His efforts in spasms exhibited such strength as literally to frighten his attendants.

S. W. H. sickened and died Aug. 10, 1827, aged thirty years. He was sick five days. Although he had been for years subject to epilepsy, yet there was no appearance of this disease in his last sickness. He was bitten by W. C. in 1822, and carried the scar of the bite to his grave. At the time, there was no general apprehension of hydrophobia, nor any excitement on the subject. It is not known that the fact of his bite was mentioned to his physician. His disease was pronounced to be something else. Whatever it might have been, it was preceded by mental anxiety, and attended by the following symptoms. He at first inclined to wander from his house, and gave indications of mental aberration, and of a great dread of water. He resided near a small lake, and before being confined to his room, requested his companion to keep him from the water, and be sure and not to let him get into that lake ; if he did, it would kill him. He is represented as having had, in the first stages of his disease, a constant dread of water, but six hours before he died he called for some, and drank of it. Before his spasms commenced, he entreated his wife, that if he should be as W. C. was, she would procure

* It is not supposed that there was any proper delirium, but merely that degree of aberration which might be supposed to arise from the violent paroxysms of the disease in a very strong muscular subject. L. T. C. and C. C. particularly were very powerful men, and C. C. was unrivaled as a wrestler.

† The prevailing popular impressions on this subject are well known ; perhaps it is not surprising that some of the distressing and various appearances in hydrophobic patients should be attributed, by the terrified beholders, to a specific canine influence. Medical men do not admit the genuineness of these appearances.

some strong man to take care of him, and be careful to get some one who would make him mind, lest he should hurt others. During one of his spasms, he bit his tongue and loosened a piece of it. He requested his wife to take the scissors and cut it out, but to take care and not get any of the blood on her. He would take drinks to oblige his friends and attendants, but they say he always swallowed with a convulsive effort, such as they cannot describe. The disposition to wander continued to the last. He tried various expedients to be released, and to escape from the house. He would grin and fix his glaring eyes on his attendants, when near him, in such a manner as to make them guard against being bitten. He would take a handkerchief and bed clothes in his teeth, and bite and shake them. He is represented as of a peaceable disposition, and some of his friends think that he made great efforts to curb the disposition to bite.

The death of L. T. C. and S. W. H. left on the minds of the community an impression of mystery. There was a general feeling that the cases were very singular. Individuals, who witnessed their sickness, and were acquainted with the facts above mentioned, firmly believed that they died of hydrophobia: but no professional man had encouraged that belief, or laid stress on the facts which supported it; and the friends, for obvious reasons, were not forward to express it.

Things remained thus, till C. C. a brother of W. C. sickened and died, March 24, 1828, aged thirty-seven years. He was sick but eleven days. He was a strong laboring man, and had never before been the subject of sickness. After attending a meeting in the evening, he retired to rest, and slept as usual. About midnight, he suddenly sprang from bed, and ran undressed into the street, screaming so loudly as to alarm his neighbors. From this first decisive appearance of his disease, remedies seemed not even to abate his distressing symptoms. Nor was his malady suspected by his attending physician, till the third or fourth day. On my making inquiries of a parishioner, in regard to the sick man, he said to me, 'He is no better. Do you know what people say about C.? They say he was bitten by his brother W. who died with hydrophobia, and they can prove it, and they know he is mad.' I immediately made inquiries, and became satisfied that this was not mere talk. I saw, the next day, his attending physician, and having mentioned the facts to him, I asked if he had suspected the nature of the disease. He replied, no. I then inquired if he would not examine his authorities and look for the symptoms of the disease, with sole reference to them. His next visit to the sick man resulted in his conviction that his disease was hydrophobia. The physician had told the attendants that if they would preserve some of the saliva, and inoculate a dog with it, he would become rabid in a certain number of days. They had carefully taken up on a woollen string and dropped into a phial a quantity of this, and corked the phial. They had selected the victim and the place of his confinement, and were holding the corked phial in the hand, when the man was seized with his last spasm. The phial was suddenly dropped, and all search for it in future proved ineffectual—a circumstance deeply to be regretted, for had the experiment been made, the result would probably have removed from every mind, capable of appreciating it, all doubt respecting the sick man's disease.

The following are some of the facts as stated to me by his physician,* and corroborated by his widow and those who attended him. The sight of water produced a recurrence of distressing spasms; or, in the words of the attendants, made him rave. In the intervals of spasms, he was rational. In one, he requested his father-in-law to remove and hide his razors, for he did not know what he might be left to do in his turns. In another, he gave this caution to his wife: 'I wish you to keep away from me when I have these turns; I know not why it is, but I want to bite, and I fear I shall bite you.' His attendants think he strove to curb the disposition to bite. It was, however, very evident. A neighbor one evening entered the room. On seeing him, he immediately said, in a pleasant way, 'How do you do, Mr. B——? I am glad to see you. Come here; I want to shake hands with you.' The neighbor approached, and extended his hand. The sick man seized it instantly, and with a convulsive spring rose from the lying posture and drew it to his mouth. The attendants who stood near, and expected this result of shaking hands, instantly seized Mr. B——, and forced him from the sick man's grasp before he was bitten. He talked much about biting; and the attendants, as usual in such cases, imagined that he growled, snapped and barked, like a dog. The shaking of pillows and bed clothes in his teeth, was a frequent exercise. His eyes were glassy and watery. He spit much, the night after he left the bed, and during his sickness. He spit to all parts of the room, and watched the opportunity to spit on persons who came into it. During his sickness, and especially the night before his death, he screamed and hallooed dreadfully.

On the supposition that these are to be regarded as cases of real hydrophobia, the facts will stand thus:

1. W. C., first victim, bitten by a rabid dog in 1807. Sick fifteen days. Died fifteen years after the bite, in 1822, *Æ.* 26 years.

2. L. T. C., second victim, bitten by W. C. in 1822. Sick four-teen days. Died short of four years after the bite, in 1826, *Æ.* 32 years.

3. S. W. H., third victim, bitten by W. C. in 1822. Sick five days. Died five years after the bite, in 1827, *Æ.* 30 years.

4. C. C., fourth victim, bitten by W. C. in 1822. Sick eleven days. Died short of six years after the bite, in 1828, *Æ.* 37 years.

These facts are well established, and they preclude the necessity, if not the propriety, of referring the symptoms of the disease to what is sometimes termed spontaneous hydrophobia. Nor did the previous habits of life, in a majority of the patients, at all favor such a reference of their symptoms.

C. C. was a constant spectator of his brother W. C. in his last sickness. They died in the same house. C. C. also watched with L. T. C. and S. W. H., and repeatedly told his wife, as she now affirms, that they were sick just as his brother was. A sensible man who witnessed three of the cases, says the persons were sick alike, as nearly as the difference of natural dispositions and the habits of life would permit.

* Dr. Noyes, who was the attending physician in the last case, intended to collect the facts and draw up the statement. We had conversed on the subject, and agreed in our views of its importance, and he had consented to undertake it. His early removal prevented. I shall always regret that the task had not devolved on some member of the medical profession.

Different individuals, who observed attentively two or three of the cases, bear the same testimony, in such numbers as to include in it all the four. With persons at all acquainted with the facts and the cases, it is now the general opinion that the disease was hydrophobia.

All four dreaded confinement, and exhibited great quickness of apprehension in regard to persons and circumstances which surrounded them. There was uncommon agility and sprightliness in their motions, and an evident display of cunning, especially in their efforts to escape and to bite persons. Till within about two days of the termination of the disease, the patients were not only inclined to escape, but a primary object of the intended escape was to have opportunity to run. It is the opinion of the attendants, that if they could have escaped, they would have run till they dropped down dead. One, among other things, pretended to have business at a place sixteen miles distant. He plead with his attendants to let him place his feet on the door steps, and assured them that if he might do it, he would run so that no man could overtake him till he had reached the place.

The fears of all were that they should injure others. One was, at times, afraid of receiving injury from others; but this fact, it is believed, may be explained by a reference to circumstances peculiar to himself. All that is claimed, however, is that there was a general concurrence in the class of symptoms to which allusion has been made. From momentary agitations, connected with slight mental aberration, the spasms gradually increased, in duration and force, to the last. One attendant says the strength of the patient seemed to increase during the spasms, till he finally sunk under them. This man's services have always been sought, and freely rendered, in extreme sickness. He affirms that he never witnessed cases at all resembling these. In attending on the last individual, he covered with rags spots of fractured skin on his hands, lest the saliva of the patient should reach them. Another procured and constantly wore a pair of stout gloves. An attendant in one of the cases, says, that twelve hours' service at a time was as much as he could endure, and that others were obliged frequently to change, and retire from the scene, and suspend the efforts required of them when present.

Many testify that there was in all the cases, during the spasms or spells as termed, an uncommon scent from the patient's breath. This was observed in every case by numbers. Some designate it by the epithet strong; others say that they never experienced the like before, nor since, and they cannot describe it. All seem to remember it as perfectly distinct in its character. One person, in endeavoring to convey an idea of it, said it resembled that of cats and dogs when fighting. This smell was not perceived except at the times when the patient raved, or had spells, and frothed at the mouth.

It is the opinion of attendants, that the patients were literally stiffened during the spasms, and that in the latter stages of the disease they might have been raised up erect, by the application of force to the head, without any bending of the body. The corpses were stiff immediately after dissolution, and the jaws set so as to require no muffler. On them, and near the surface of the skin, blue spots appeared, which some mistook for indications of mortification. One was kept four days, and on this

body the spots wholly disappeared, and it underwent no other visible change. It is stated that the spots appeared as soon as the patient was supposed to be struck with death; and that when they disappeared, they left the skin slightly affected, and of a greenish hue. It is said the corpses had a strange appearance, the countenance resembling that of a living person in health when cold. Some designate this appearance by the epithet blue.

P. S. An intelligent medical man, who has heard the above statements, and conversed largely with witnesses, believes these cases to have been hydrophobia. Two of them have been attributed by others to delirium tremens, but the previous habits of the patients did not favor that idea; none of the four were addicted to the use of ardent spirits, and one of them had a constitutional aversion to distilled liquors.

DR. WARE'S CASE OF ISOLATED CHOLERA.

To the Editor of the Boston Medical and Surgical Journal.

SIR,—You have frequently requested the readers of your Journal to furnish you with any case of malignant cholera that has occurred or may occur in their practice. As the following case occurred in the country, and the subject of it had never been near any one who had been sick with the disease, it may throw some light upon the question of the contagiousness of the malady.

The subject of this case was Mr. Stillman Willis, aged 48, who lived at the Upper Mills, in Dorchester. On Monday, October the 22d, Mr. Willis continued at his work as usual until noon. Having eaten his dinner, he complained of feeling rather debilitated, and concluded not to return to his labors that afternoon. His debility was occasioned by a diarrhoea which he had suffered for a number of days previous, and which on this day had increased. He however employed himself near home about some light work, until 4 o'clock. At this time he returned to his house, and complained of feeling sick at his stomach and of pain in the bowels. At 5 o'clock he vomited a large quantity of thin fluid resembling rice water, and had a profuse dejection from the bowels of the same kind of matter, amounting to some quarts. These evacuations so weakened him that he could not support himself, and he fainted while his friends were assisting him up to his chamber.

I was immediately sent for, and saw him at 6 o'clock. The general aspect of the patient was such that I was led at once to suspect that he was laboring under the cholera, and that the collapse stage had already taken place. At this period the whole features of the man were shrunk-en, and expressive of great anxiety, suffering and distress. The skin of the face, neck, arms and legs, exhibited a deep leaden hue. The eyes were sunken and surrounded by a broad circle of a dark violet color. The whole surface was cool; and the feet, legs, hands and arms, were cold. The pulse at the wrist could not be felt. The tongue was white, moist and cool, and his thirst urgent. He complained of great distress at the pit of his stomach; and spasmodic contractions of the fingers and

toes, and muscles of the legs and arms, were frequent and attended with pain. His respiration was rather slow, but laborious, and breath cool. His voice was hoarse and hollow, and he spoke with difficulty. His mind, however, seemed to be clear.

Feeling great interest for the patient, I requested Dr. Thaxter of Dorchester, and Dr. Fisher of Boston, to see the patient with me. They both pronounced the disease to be a case of malignant cholera. The usual remedies in like cases were resorted to, but with no effect. I remained with my patient during the night. The spasms continued to increase, and the surface of the patient to become colder. The sickness of the stomach continued for some time; but no evacuation either from the stomach or bowels took place after 12 o'clock, nor was there any urine passed after my arrival. The face, neck, arms and legs, in the course of the night became blue; and as the spasms increased, the hands and feet were drawn up and inwards, and the fingers and toes became separated from and bent upon each other. In consequence of the external heat which was applied, the surface gradually became warm, but no pulse in the extremities could be discovered distinctly. The warmth of the body did not continue long, and soon the whole surface was covered by a profuse cold sweat. The skin of the hands and feet presented a wrinkled appearance, and the nails almost a black color. The eyes were now rolled up, and the cornea seemed to be covered with a thin layer of serum or some glutinous secretion.

This state of things continued until 8 o'clock in the morning, when the poor man expired, fifteen hours after the attack. The spasms continued to take place in the different parts of the body, and particularly in the extremities, for an hour after death; and by pinching or striking the flexor muscles of the arms, the hands and fingers would move and cause the hand to turn considerably.

An examination of the body was made at 11 o'clock, three hours after death, in the presence of Dr. Fisher of Boston, and Drs. Thaxter, Mulliken and Spooner of Dorchester. The body at this time had lost a good deal of its blue color; but slight spasmodic movements were observed to take place on pinching the muscles, and these became knotted and hard when force was applied. The fingers and toes were bent in and corrugated, and the nails were blue. On opening the thorax, the lungs were found collapsed, but were healthy. The heart was of the natural size, and healthy. The right cavities were empty and flaccid; the left ventricle contained a little black but uncoagulated blood. The blood in the aorta was very thick and black. On examining the abdomen, we found the liver healthy and the gallbladder distended with bile, which, however, was much thicker and of a blacker color than natural. The external appearance of the stomach and intestines, natural. The stomach and bowels were moderately distended by a thin fluid and by gas. On opening these organs we found them to contain a very large quantity of fluid resembling rice water, and similar to that which the patient had vomited and passed from the bowels. In the stomach the fluid was rather thicker than in the intestines. In the large intestines it was quite thin. The mucous coat of the stomach and of the whole canal was thickly covered with a whitish matter, which when scraped from the

membrane by the scalpel resembled almost exactly the paste which is used by paper hangers. There was no fecal matter whatever in the bowels, nor any appearance of bile. No traces of inflammation were discovered in these organs; but a portion of the stomach near the cardia was more red than natural, and of a deeper color than the other portion of the organ. The same red color of the membrane was observed in the small intestines, just below the entrance of the gall duct, and in one or more spots in the large intestines. The bladder was firmly contracted, and contained about a teaspoonful of milk-like fluid.

From the symptoms and the post-mortem appearances which this case presented, you will, I think, readily believe with me that it was a case of malignant or spasmodic cholera. It was the first one which I had seen; and as it presented symptoms in many respects unlike any which I had witnessed, I was desirous of visiting other cases in order to see if they corresponded with the one which had occurred in my practice. On the very evening of the day on which my patient died, I was informed by Drs. Fisher and Perry that cases could then be seen in the Tremont Hospital, and in Broad Street. These cases I visited, and found that the symptoms which they exhibited were similar to those which had existed in the one at Dorchester. I think I may say, however, that in no one of the subjects which I visited in Boston, were the spasms, the sufferings, and the blue appearance of the surface, so strongly marked as in the case of Mr. Willis.

In searching for a cause of the disease which so suddenly destroyed Mr. W., I learned the following facts. He was an industrious man. He had long been more or less troubled with a chronic diarrhœa, which became more urgent for a week or ten days previous to the fatal attack; and for two days preceding the collapse, it was very troublesome. He resided on the banks of the Neponset River, in a comfortable house. In the cellar, however, there was usually more or less water, which issued from a well or spring which was situated at one corner. He seldom left home, and for more than three months previous to his death he had not left the place. He had never seen or been near a case of the cholera. Certainly no case had occurred in this region before, nor has any occurred since, so far as I have learned. I should observe, however, that two of the inmates of the house, one of which was in Mr. Willis's family, were troubled with diarrhœa and vomiting on the day of, and on the day after, the death of Mr. Willis; which, however, yielded readily to medicine and to diet.

The existence of this case, I think, has some bearing upon the subject of contagion; and it is for this reason, more than for any other, that I have troubled you with the above account of it. It is entirely an isolated case—traceable to no other, and giving rise to no other.

Yours, &c.

Milton, November 20, 1832.

JONATHAN WARE.

SCIRRHOUS PYLORUS, WITH STRICTURE OF THE RECTUM.

Case of Scirrhus and Ulceration of the Pylorus, with Stricture of the Rectum. By HORACE A. BARROWS, M.D. of Leeds, Maine.

[Communicated for the Boston Medical and Surgical Journal.]

ISAAC FREEMAN, aged 64, had been troubled with asthma for many years ; sometimes amounting to a severe and debilitating cough, and again abating so as to leave the lungs almost free from complaint. Six years ago he used ardent spirits habitually and freely ; and till within two years was quite corpulent, weighing about 200 lb. From 1826 he began to suffer somewhat from dyspepsia ; frequent irregularity of the bowels ; occasionally costiveness, and again a troublesome looseness. He got along comfortably, however, enjoying tolerable health except the severe asthmatic attacks, and retained his flesh till 1830, when he began to suffer more severely from dyspeptic symptoms, and consequent gradual emaciation. During this year his symptoms generally were those of moderate chronic gastritis. The morbid symptoms had now become so habitual as to afford him but short intervals of exemption from some species of suffering. In 1831 there was no material alteration or diversity of his symptoms, but a gradual aggravation of the whole. In the winter and first part of the spring of the present year, he suffered severely from *asthma* ; but in April the asthmatic attacks left him entirely, and were never renewed. There appeared to be a complete *metastasis* of disease from the chest to the abdomen ; or rather, the amount of disease which had for many years existed in the thoracic viscera, seemed to be most effectually transferred to the abdomen, and added to the derangements there existing, by which addition they were increased in a tenfold proportion. From this time everything morbid seemed to centre in the organs of digestion, and were followed by a total derangement of their varied functions.

The habitual and extreme constipation now became one of the most formidable symptoms ; to alleviate which, required the most drastic cathartics, or the most stimulating injections—milder means and methods proving wholly inefficient, although thoroughly tried per *orem* et per *anum*. The nausea, vomiting, flatulence, acidity of the *primæ viæ*, 'growing at the stomach,' colic pains, occasional fainting, &c. would generally admit of temporary alleviation by the prompt application of remedies, but no permanent benefit followed. He continued to ride out till August, when he took his room and soon afterwards his bed ; his case now becoming more alarming, required constant medical attendance.

About this time the tumefaction at the pylorus becoming more apparent, enabled the patient himself to form the following prognosis respecting his case, viz. 'that there existed in his alimentary canal a living animal,' whether frog, toad, serpent, or some other vile reptile, he was not able to determine ; but that *some* 'vile beast' thus existed he was confident, and this confidence increased with the progress of the disease. Consultations were had repeatedly, but there was no amendment from the varied prescriptions. The disease progressed steadily to a fatal crisis, and on the 12th of November he expired.

For a fortnight previous to his death he took but trifling nourishment—some sweetened water, cider and water, &c. These liquids could be retained but a very few minutes, sometimes were rejected immediately. His thirst was extreme; would drink from three to six gallons daily.

SECTIO CADAVERIS. *Thorax.* The lungs were, upon the *left* side, perfectly healthy and natural; upon the *right* side, universally adherent to the pleura; otherwise natural. Heart natural, except an unusual flabbiness. *Abdomen.* Peritoneum natural. Liver very large, but healthy. Gallbladder much enlarged and somewhat diseased. Spleen and pancreas free from indurations. *Stomach.* Cardiac portion healthy and natural. Pylorus completely scirrhus, with ulceration upon the upper and anterior surface. This scirrhus enlargement was very extensive, involving not only the whole pyloric orifice, but a considerable part of the pyloric extremity of the stomach. This tumor, in appearance, feel and texture, was precisely similar to incipient cancerous tumors of the mammary glands. The intestines were healthy and natural as far as the sigmoid flexure of the colon, immediately below which was found a stricture of three inches in extent, the intestine being contracted to one third its diameter. Beyond this, the intestine was natural till within four inches of the anus, where another similar stricture commenced, and continued through the remainder of the rectum.

December 3, 1832.

INFLUENCE OF OCCUPATION ON HEALTH.—NO. IV.

[Communicated for the Boston Medical and Surgical Journal.]

CLASS IV.—*Professions which require an undue or excessive use of the vocal organs.* The employments to be ranked under this head, include a wide range, not much resembling each other except in the single peculiarity now alluded to; for the tongue subserves so great a variety of uses, that some among them will be found to claim but a remote relationship. In fact, to this class may be referred orators generally, whether legislators, barristers, auctioneers, theatrical performers, or, last, not least, the class of *criers*, whose exertions, if not so unremitting, are neither less arduous nor less useful, and to whom those slothful citizens, who would fain pass their mornings in sleep, are so often indebted for an early call. These occupations all require a louder tone of voice than that of conversation, and most of them a continued exertion for several hours. They are generally regarded as healthy; and I am not aware that injurious consequences often arise simply from the employment of the voice in these uses, independently of other causes of disease. It might be supposed that in the class of criers, in whom this exertion is complicated with exposure to severe cold, the danger from this source would be increased. It does not appear, however, that this is the case; and we find many persons continue this occupation to an advanced age, without experiencing any trouble from this cause.

Of occupations affecting the vocal organs, independent of speaking, it will be sufficient to mention singing and playing on wind instruments. These are both attended with more danger. Singing, if practised to

excess, and especially if commenced too early in life, is very likely to impair and exhaust the powers of the voice ; so that singers by profession are very frequently obliged to relinquish their employment, or to continue in the mortifying consciousness of diminished powers. When there exists any previous tendency to disease of the lungs, the evil is materially increased, and the latent seeds of the malady are almost sure to be called into activity by indulgence in this use of the vocal powers.

Playing on wind instruments, when pursued as a profession, can hardly be considered as favorable to health. The direct operation on the lungs, which is sufficiently detrimental, is favored by late hours and exposure to night air, and vicissitudes of temperature. It is an employment to be pursued with much caution, and should if possible be abandoned when any evil effects are perceived to be induced.

CLASS V.—*Professions which require great exertions of some one of the senses.* There are a few professions which may prove injurious by requiring an undue exertion of the organs of vision ; such are those of engravers, watchmakers, and jewellers, who are obliged to look at small objects very attentively, and to make use of magnifying lenses to assist the sight. The kind of evil arising from this source may readily be imagined. They are principally inflammation and weakness of the organ, and may render necessary an occasional suspension of the employment. A less evil, but a real one, is the altered focus of convenient vision and the diminished power of the eye to adapt itself to objects at different distances. In a perfectly healthy state of the organ, it is able by the action of its muscles so to alter its focus as to obtain perfect vision, both of near and distant objects. This power, like others, depends for improvement on exercise ; and if the eye be directed solely to objects within a few inches of itself, those muscles which tend to increase its convexity being alone brought into action, this power is gradually increased, while the other is as regularly diminished. The influence of habit on the focus of vision is well exemplified in the case of sailors, who acquire the power of distinctly discerning objects at a distance at which they are totally invisible to him who has passed his life on terra firma ; and, on the contrary, in the description of trades of which I am now speaking, the eye acquires a magnifying power for near objects, while those at a distance become invisible. The remedy is of course to be sought in occasional relaxation : but the evil is one of those few which are remedied by time, independently of the removal of its cause. In old age the muscles are relaxed, and the ball of the eye, rendered less convex, becomes again fitted for distant vision.

Apart from the effect produced by examining minute objects, there are occupations which simply make a demand on the eye for long continued and intense exertion, where the objects are not too small for distinct vision, and the use of a lens is never required. In setting types, the eye is severely tasked by the long continuance of the exertion, though not greater in itself than that of ordinary reading. Writing at a desk as an occupation, may be referred to this head. These employments are not often injurious to vision ; and when they are found so, the remedy is to be sought in the removal of the cause.

Another source of injury to the eyes, distinct from either of the two last, is that arising from the reflection of light from bright and polished surfaces. In composition with new type, and in examining the face of stereotype plates, the eyes are subjected to annoyance from this cause. Many of the workmen engaged in these and similar processes, attempt to remedy the evil by a shade worn upon the head. This is a good defence against the direct light thrown upon the eyes from an opposite window or lamp ; but the reflected light from a surface toward which the eyes are directed, is not avoided by its use. If this is the object intended to be attained, the color should be a dark green and not white. All these expedients, however, are open to the objection of keeping the eyes too warm, and rendering them more susceptible to external agency. If no inconvenience is experienced without their use, they had better be dispensed with. As a general tonic to the eye and a preventive of weakness and disease, there is none more familiar or more salutary than the use of cold water.

CLASS VI.—Occupations which require to be pursued at unseasonable hours. I have thought best to include in this class a few professions, not having indeed much general resemblance, and most of them sufficiently favorable to health, except in the single circumstance that they interfere with the regular hours of taking sleep. Of these some are taken up only from time to time by those who have other regular employments, with which these are not allowed seriously to interfere. Such is the case with watchmen, whose occasional services in this department are not calculated to produce any material influence on the constitution. Others form distinct departments of certain trades, as in printing ; some branches of which, as the printing of daily newspapers, requires, as before stated, a large proportion of the labor to be performed at night. While this class are engaged in furnishing the earliest food for the mind, another are equally occupied in preparing for the first cravings of the appetite ; and the breakfast table which is furnished forth by their united assistance, has perhaps cost a sleepless night to a score of artisans. There are others whose occupations equally oblige them to turn night into day ; as the drivers of public coaches on certain portions of the route—and likewise workmen in foundries and glasshouses, in which the artificial temperature which is required must be maintained for a certain time without intermission.

In employments of this kind, the essential condition for the maintenance of health seems to be to guard against intemperance and cold, and neither to commence the occupation too early nor continue it too long without interruption. It has been said, indeed, that it was indifferent at what hour sleep was taken, so that a sufficient proportion of time be devoted to it. This admits of considerable doubt ; but it is certain that in adults, where no other cause of disease is superadded to that now mentioned, the mere circumstance of late hours is not adequate to produce any obvious physical effect. To the young, the injury arising from this cause is much more considerable. To them a greater amount of sleep is necessary ; and a certain regularity in hours appears to be essential to the due development of their physical powers. I cannot believe that in

children the health and vigor can be permanently maintained, if the hours destined for rest are regularly and constantly made a period of labor.

But the worst effect of night labor, after all, is its moral influence. It tends to unsettle the regularity of the habits, tempts men to neglect their homes and their families, and thus, unless the tendency is guarded against and resisted, may lead indirectly to dissipation and vice. There is most danger, however, of this effect being produced, when a branch of labor, which is continued day and night for a time, is then intermitted for a considerable interval. Such is the case with the blowing in some manufactories of glass : the heat for this purpose being maintained for such period only as corresponds with the labor required in the other departments. The intervals are consequently passed in idleness, which too often induces vicious and injurious indulgence.

BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON, DECEMBER 19, 1832.

THE RESURRECTIONISTS.

It has been our uniform belief that no possible method could be devised for rendering secure the sacred mansions of the dead, but that which was recently adopted by the Legislature of Massachusetts, and soon after by the Parliament of Great Britain. In both countries the remedy has been effectual. By abolishing the office of the resurrectionist, it rids the community of the whole band of speculators, from whom alone violation of the grave could be apprehended ; the remains of mortality that rest in the earth, repose there in security ; and the minds of surviving friends are no longer harassed by the fears that, in times past, added so much to the poignancy of grief at the death of a relative or friend. Such fears were well grounded ; they were rational, and it is therefore well that they are hushed. No man who possesses anything of a philosophical mind, would object that his body, after death, should subserve the purposes of science and of humanity ; but it is quite a different thing to contemplate one's mortal part deposited as a temptation to crime, and made an article of speculation. The apprehensions therefore that grew out of the former state of the law, respecting dissection, are, in more than one view of the subject, entirely put at rest. The grave is effectually protected, the means of anatomical knowledge supplied, and the only circumstance attending dissection that could disturb the dying or annoy his friends, necessarily dispensed with.

The following notice in an English Journal illustrates one effect of the late law on this subject, in England.

Some of those desperate men who heretofore have lived by the plunder of the grave, have been endeavoring, in various ways, to annoy and dis-

turb the anatomical teachers in the metropolis. In some instances they have endeavored to create disturbance, with a view of extorting money ; in others, they have tried to obtain employment at their old occupation, offering to furnish 'subjects' for two pounds each, instead of twelve, the average price of last year. Thinking the temptation would prove too strong to be resisted, a party of them last week went one night to several schools with two bodies, offering them for anything or nothing : at last they pressed one gentleman for heaven's sake to take the bodies, were it only to bury them, for they were fearful of being detected, as no one would give them admission. We can confidently state, that the determination peremptorily to decline all connection with these men, has not been deviated from in a single instance, and thus the public has been the first to gain by the new act ; for the temptation to rob the grave ceases with the possibility of disposing of the plunder, and thus may the friends of the deceased feel assured that their '*requiescat in pace*' will not be in vain—that hereafter the grave will, indeed, be sacred.

On the Importance of the Nitrate of Silver in Surgery.—We are apt to be impressed, says a writer in the London Lancet, by cases which occur in our own families ; and such a case has forcibly brought to my mind, during the past week, how much the profession of surgery owes to Mr. Higginbottom for his Treatise on the Nitrate of Silver.

My cook wounded the back of the hand, over the tendon leading to the middle finger, very severely, by its being caught by a hook used to suspend meat in the larder. Whether this hook was merely blunt and rusted, or whether it was poisoned by animal matter, I do not pretend to say : but more frightful consequences I never beheld. In four hours the back of the hand was excessively swelled and painful ; the back part of the middle and third finger was affected by extreme numb pain, and pain and redness extended up the arm.

I gave an emetic—calomel and senna. I applied the nitrate of silver deeply in the wound, and so as to produce a complete eschar of the skin, all over the painful, red, and swollen parts. The effect was magical. In two days there was no dream of danger.

I have not thought it necessary to say more on this case, my object being only to draw the attention of the profession to Mr. Higginbottom's work, in which so many similar cases are fully detailed. I cannot refrain from expressing my opinion on that work—viz. that it constitutes the most valuable addition recently made to surgery. It should be in the hands of every student.

P. S.—The effects of the nitrate of silver are surely unaccountable. The middle joint of the middle finger was swollen and tender, from a wrench in getting out of a gig. It had been stationary for a month. The part was involved in a black eschar made by the nitrate of silver. The swelling and tenderness subsided. Before the eschar peeled off the part was well !

Comparative Productiveness of certain Vegetables.—A spot of little more than a thousand square feet, will contain from twenty to forty banana plants. A cluster of bananas, produced on a single plant, often contains from one hundred and sixty to one hundred and eighty fruits, and weighs from seventy to eighty pounds. But on reckoning the weight of a clus-

ter only at forty pounds, such a plantation would produce more than four thousand pounds of nutritive substance. M. Humboldt calculates, that as thirty-three pounds of wheat, and ninety-nine pounds of potatoes, require the same space as that in which four thousand pounds of bananas are grown, the produce of bananas is, consequently, to that of wheat as 133, and to that of potatoes 44.1.—*Penny Magazine*.

Increased Population of Austria.—The number of births in Austria during the years 1828-29-30, amounted to 2,275,532, and the deaths to 1,928,434; so that during the three years above mentioned, the increase in the population was 347,098. The greatest increase took place in the maritime provinces, and in Dalmatia, Bohemia, Moravia. On the other hand, in Lombardy, Styria, Venice, and Carinthia, there has been no change.—*Gazette Médicale*.

Arresting Hemorrhage.—Dr. Arentz, of Norway, recommends nitric acid as the most powerful means of arresting hæmorrhage. In bleeding from a vessel too deeply seated to be easily accessible, or in false aneurism, he pours eight or ten drops of nitric acid into the wound.—*Casper Critisches Repertor*.

Wine from Potatoes.—M. Jacob, an old army officer, having an estate at Forges on the Meuse, has occupied himself in endeavoring to make wine from potatoes; and, after many ingenious experiments, has at length obtained a liquor like Muscadell. He confidently anticipates producing other varieties, and constituting a new and important article of commerce.

Whole number of deaths in Boston for the week ending Dec. 15, 33. Males, 91—Females, 19.

Of infantile, 2—cholera malignant, 2—dropsy, 3—consumption, 1—hooping cough, 1—inflammation of the lungs, 2—old age, 1—unknown, 1—lung fever, 5—sudden, 1—inflammation in the bowels, 1—scarlet fever, 1—disease of the heart, 2—atrophy, 1—croup, 1—typhous fever, 1—suicide, 1—dropsy on the brain, 1.

ADVERTISEMENTS.

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P. CLEVELAND, Secretary.

Brunswick, October 8, 1832.

Oct. 31. eop5t.

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